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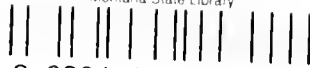
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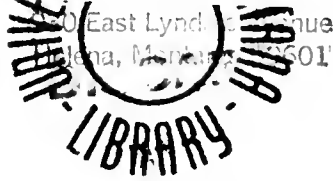
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MONTANA TAX STUDY

APPENDICES 5 THROUGH 7 TO PART SIX

by

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Appendix 5 EFFECTS OF MONTANA TAXES ON DECISIONS OF BUSINESS FIRMS

Appendix 6 STATE TAXATION AND STATE ECONOMIC GROWTH

Appendix 7 THE COMPLIANCE AND ADMINISTRATIVE COSTS OF MONTANA TAXES

A staff paper submitted through the Tax Study Task Force to the Montana Legislative Council Subcommittee on Taxation

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APPENDIX 5

EFFECTS OF MONTANA TAXES ON DECISIONS OF BUSINESS FIRMS

by John H. Wicks and John D. Bailey

Introduction

It is often alleged that taxes affect business decisions. If taxes significantly affect the decisions of business firms, then these effects are important considerations to include in an economic evaluation of our tax structure. Economists generally agree that under normal circumstances, business firms operate most efficiently in meeting the needs of society when they are free from external restrictions on their operating decisions. Therefore, when taxes influence operating decisions, they may be held to be exerting a socially undesirable effect. Some activities of business firms may be socially undesirable (for example, contributing to the production of smog); but these undesirable activities are usually not the ones influenced by taxes which are levied for general revenue purposes.

In the past ten years, there have been many studies concerning the effects of taxes on business decisions. Most of these studies have centered too closely on the location decisions industry makes. A decision on where to locate is only one of the many kinds of decisions which businesses must make. Very little has been written, and hardly any empirical studies have been conducted, in the area of the effects of state and local taxes on the actual operating decisions of business.

The purpose of this appendix is to analyze the effect of Montana taxes on the operating decisions of business firms (sole proprietorships, partnerships, and corporations) in Montana. For this purpose we designated as operating decisions only those decisions that affect the future operations of the firm. This study is designed to include only those operations of businesses that are carried on in Montana. If a firm also operates in other states, the only information considered is that pertaining to its Montana operations. Since the study covers a time period of one year, only decisions made within that year by the firms under investigation are included in the analysis. Limiting the study to a particular time period facilitated the accuracy of responses by the firms, and thus the objectivity of the study. Although both federal and state taxes may affect the decisions of a firm, we have made the implicit assumption that Montana taxes can be singled out from federal taxes as a consideration in the decision-making process.

The business firms are divided into two categories for purposes of this study. The first category is called "small business," which included sole proprietorships and partnerships, plus some corporations with less than ten stockholders which filed income tax returns as partnerships. The second category covers, as its name implies, the corporations in the study. Further division is made according to the type of firm involved. For instance, size of inventory involves no decision in a law firm, but inventory decisions are very important in a dry goods store. Therefore, we cannot compare the decisions for all businesses. However, we can state the magnitudes of the decisions made by the firms of a particular type, and we can compare decisions of a particular kind (with respect to inventories, for example) among the types of businesses making that decision. The next section describes how these analyses and comparisons were made.

Research Design

Questionnaires sent to business firms provided the data for this study. The questionnaires were sent to two separate samples of firms. The first was a sample of 400 firms which filed 1963 sole proprietorship and/or partnership returns under Montana income tax law. Some which filed partnership returns were undoubtedly corporations, since corporations with ten or fewer stockholders are allowed to file income tax returns as partnerships under Montana law. These 400 were a random sample of the firms which were the source of the proprietorship and partnership income listed in the group of 5,085 individual income tax returns described in Appendix 4 of Chapter VI. The other sample in this study consisted of 200 of the firms that filed 1964 Montana corporate license (income) tax returns. This sample was chosen at random from a list of all of the firms filing corporate returns.

First, an attempt was made to contact each of these 600 firms by telephone to request cooperation in the study. (A pilot study showed that such phoning greatly facilitated response to the questionnaires.) Each firm, whether contacted by phone or not, was sent a questionnaire, and follow-up questionnaires were mailed to the businesses which did not respond to the first inquiry.

The questionnaire stated:

It is possible that a business might make a decision differently than it ordinarily would merely because of the existence of a certain tax. During the past year, did any of the following list of Montana taxes cause your business to make any operating decisions which it would not have made except for the taxes?

These taxes were listed:

- Montana Personal Property Tax
- Montana Property Tax on Real Estate
- Montana Personal Income Tax
- Montana Inheritance Tax
- Montana Corporate License Tax
- Other Montana Taxes

The respondent was asked to check the taxes (if any) which had affected his business decisions during the past year; to state what type of decision was made because of the tax; also what the approximate total cost involved in the decisions was. To validate the response, the businessman was asked the reason(s) for making the decision. Finally, the questionnaire requested certain information for classification purposes: sales, the amounts of various taxes paid, and the firm's principal product or service.

Results

As shown in Table 1, the usable responses to the questionnaire amounted to 25.7 percent of the proprietorship and partnership sample, and 31 percent of the corporation sample. The usable returns totaled 103 and 53 respectively. The authors feel that percentage of responses was adequate. However, even more important than the percentage response is the actual number of questionnaires returned, and the degree to which these responses represent various types of businesses. Table 2 summarizes the number of responses to the questionnaires--from both unincorporated businesses and corporations--by type of firm. Although there is a preponderance of responses from farms and ranches, the authors feel that the overall

TABLE 1

RESPONSE TO THE SMALL BUSINESS AND CORPORATION SAMPLES

	Small Business	Corporations
	Sample Size 400	200
Not Usable	27	9
Did not care to participate	5	2
No longer in business	14	4
Wrong address	7	3
Usable	103	53
Returned stating that no decisions were made because of Montana taxes	58	33
Returned with one of more decisions listed as affected by Montana taxes	45	20
Total Response	130	62

distribution by type of business provides a satisfactory basis for analysis. In Table 2, the negative response column refers to those firms which reported that no decisions were made because of Montana taxes. Positive responses refer to replies that one or more taxes did affect a decision of the firm. It is significant to note that only 66, or 42 percent, of the 157 total respondents reported making any decision as a result of Montana taxation.

Several questionnaires reported different types of decisions made as a result of Montana taxes, but basically the types fell into one of the ten categories shown in Table 3. As can be seen, the decisions "not to buy property" and to "change operations in general" refers to decisions either to increase the volume of the operation to cover the present tax cost, or to reduce the volume of operation in order to reduce the tax base.

It is interesting to note these categories into which the decisions fell, but it is hard for the analysis to show any more than this. The sample was not large enough to permit any generalizations about which types of decisions were most common in certain kinds of business. However, farming and ranching decisions showed a high degree of consistency. Fourteen out of 34, or 41 percent, of the decisions made were "not to buy property." The word "property" applies to both real and personal property (such as machinery and livestock).

The dollar amount involved in each decision, and especially the dollar amount as a percent of gross revenues, gives us some idea of the magnitude of the effect on the firm. The value affected by the decisions had a wide range: from \$60 to \$160,000 in dollar terms, and from one-tenth of one percent to 193 percent of gross sales.

TABLE 2
RESPONSES BY TYPE OF BUSINESS

Business Type	Negative			Positive		
	Small Bus.	Corp.	Total	Small Bus.	Corp.	Total
Farm and Ranch	22	4	26	25	2	27
Professional	13	1	14	11	0	11
Retail	7	4	11	2	5	7
Service	6	12	18	6	3	9
Real Estate, Insurance and Finance	2	1	3	0	3	3
Prepared Food, Drink & Lodging	1	0	1	1	1	2
Wholesale distribution	3	4	7	0	2	2
Logging	0	1	1	0	1	1
Manufacturing	1	2	3	0	1	1
Mining and Oil	1	3	4	0	0	0
Rental	1	1	1	0	0	0
Overall Total	58	33	91	46	20	66

TABLE 3

TYPES OF DECISIONS REPORTED TO BE CAUSED BY MONTANA TAXES

Decision	Percentage of All Respondents Reporting Decision		
	Small Business	Corporations	Total Respondents
Not to buy property	11	6	9
Changed operations in general	9	11	9
Not to improve present property	5	5	5
To sell property	5	2	4
Reduce inventory	3	5	3
Decrease number of employees	3	2	3
Income averaged over years	2	3	3
Changed business form	1	6	3
Raised prices	1	3	2
Reduced work effort	2	2	2

Table 4 shows the dollar amount involved in each decision for each kind of business in both the corporate and small business samples. It must be realized that some of the respondents were not able to, or did not, place a dollar amount on the decision. The decisions listed comprise 49 percent of all of the decisions which were reported.

Table 4 also shows that the reported amounts involved in the decisions vary widely from firm to firm--most of them small in relation to the yearly sales of the firms. Other firms in the industries listed, as well as in certain other industries (oil production for example,) indicated that Montana taxes affected their decisions, but they did not list the dollar magnitudes of the decisions. This lack tends to reduce the validity of the response.

The Montana taxes that proved to be the most significant factors in making decisions were the Montana property tax and the Montana personal income tax. The corporate license tax was listed several times by small businesses--proprietorships and partnerships which are not subject to this tax--usually on the grounds that favorable features of the corporate license tax made incorporation desirable. Thus, these firms were in the process of incorporating. (One favorable feature of this tax is the fact that firms with less than ten stockholders may file as partnerships, and thus be liable for the personal income tax plus the minimum corporate tax of \$10, while being able to enjoy the legal advantages of the corporate form of

TABLE 4

SIZE OF THE DECISIONS AFFECTED BY MONTANA TAXES
FOR VARIOUS TYPES OF BUSINESS FIRMS

	Dollars	Percent of sales		Dollars	Percent of sales
<u>Farming and ranching</u>			<u>Service</u>		
Small businesses:			Small businesses:		
60	0.0		700	0.2	
120	0.4		1,500	0.1	
185	---	*	1,600	0.1	
500	1.3		2,000	0.1	
528	5.1		Corporate:		
1,000	1.8		150	0.0	
1,000	5.3		500	0.4	
2,000	4.4		10,000	25.0	
2,000	4.5				
3,000	---	*	<u>Real estate, Insurance, Finance</u>		
4,500	18.2		Corporate:		
5,000	50.0		750	18.0	
8,000	26.6		5,000	18.5	
25,000	40.3				
27,000	54.0		<u>Prepared food, drinks, lodging</u>		
Corporate:			Corporate:		
1,500	---	*	2,500	3.1	
21,000	98.4		3,000	3.7	
			3,500	4.5	
<u>Professional</u>					
Small businesses:			<u>Construction</u>		
300	0.3		Small businesses:		
400	0.4		1,600	4.5	
400	0.8		7,000	3.2	
500	0.5		Corporate:		
500	1.1		11,000	6.1	
900	2.1				
1,000	1.1		<u>Wholesaling, distribution</u>		
1,000	5.0		Corporate:		
2,500	1.0		2,600	0.0	
6,000	12.7		10,000	4.6	
25,000	22.2		30,000	13.8	
30,000	71.4		160,000	8.3	
65,000	92.2				
<u>Retail trade</u>			<u>Logging</u>		
Small businesses:			Corporate:		
15,000	1.6		125,000	93.7	
Corporate:					
1,500	0.5				
3,000	0.6				
3,500	---	*			
5,000	0.1				
20,000	4.0				

* Sales figure was unavailable.

organization.) Table 5 shows the number of times that each sample mentioned various types of Montana taxes.

TABLE 5
NUMBER OF DECISIONS AFFECTED BY VARIOUS MONTANA TAXES

	By Form of Business Organization		By Industry		
	Small Business	Corporations	Farms and Ranches	Professional and Service	Other
Property tax on real estate	27	9	15	10	11
Personal property tax	26	12	15	11	12
Individual income tax	17	5	9	7	6
Inheritance tax	6	3	6	0	3
Corporate license tax	3	5	1	5	2
Oil producers license tax	0	1	0	0	1

The reasons given for making decisions by firms who listed the magnitudes of the decision involved appeared to differ from the reasons listed by firms who simply stated the general nature of the decision. Firms who listed the magnitudes of their decisions tended to cite excessive tax rates as the reason for their decision, while firms who did not estimate magnitudes tended to emphasize keeping their tax base as small as possible.

The reasons given by business firms for making decisions in response to Montana taxes seemed to be plausible in most instances. However, the explanations given were generally too brief to analyze them on economic grounds. Many businessmen do not have a large body of knowledge regarding taxes. This lack could have influenced the precision or accuracy of the responses. Nevertheless, as long as a firm does make a decision as a result of a tax, the reasoning process used to reach this decision is really immaterial.

Typical reasons stated by firms were as follows:

1. The tax rate is too high.
2. The tax plus the cost of investment is too high.

3. The revenue left after the tax does not warrant expansion.
4. The value of the income from the asset involved is less than the amount of the tax.
5. There is no use building up a larger tax base to forfeit at death.
6. Making the reported decision reduces the tax base (via gifts).
7. Corporate organization gives a better tax position.

A number of the firms which reported making no decisions as a result of taxes volunteered reasons why Montana taxes had not influenced their decisions during the past year. The factor most often mentioned by these firms was that no major changes had been contemplated during the past year. Others stated that because there were so many considerations other than taxes to include in decision making, it was hard to say that taxes alone caused a decision.

Conclusions

The results of this paper suggest that the businessmen questioned in the study think that Montana taxes generally do not greatly affect the decisions of business firms. Fifty-eight percent of those responding to the questionnaires indicated that Montana taxes had not caused them to make any decisions during the past year. Most of the decision which were reported were small in relation to sales. Alteration of business firms' decisions by a tax is generally considered to be an adverse economic effect of the tax.

APPENDIX 6

STATE TAXATION AND STATE ECONOMIC GROWTH

by William R. Ingram and John H. Wicks

Because of a growing populace and increased demands for improved services and facilities, state and local governments have found it necessary to expend more and more revenue; accordingly, these governments are constantly probing for sources of additional income. This involves, among other actions, a continuous search for ways to obtain greater collections from taxation and exhaustive efforts to establish the optimum tax mix.

These increased requirements for governmental expenditures and the resulting search for additional revenue has intensified the argument concerning the relationship between state and local tax burdens and state economic growth.

One line of reasoning states that state and local taxes substantially affect the ability of a firm to save for investment purposes and that they deter decisions to invest; this reasoning argues that taxes affect the locational decisions of manufacturers and other businessmen. According to this line of reasoning, differentials in state economic progress over the past several years are inversely associated with the differentials in state and local tax burdens.

An opposing viewpoint is that these "anti-tax" conclusions are erroneous--that state tax burdens at the levels which have existed historically have had inconsequential effect upon business expansion and state economic growth. According to this viewpoint, economic activity is based, in general, upon considerations far more important than the levels of state tax collections.

Adding impetus to the controversy has been the increasing tendency for state and local governments to give tax concessions and other inducements designed to influence decisions made by business executives.

This paper is a brief report of a study which investigated the relationship between state and local taxes and state economic growth in an attempt to determine whether or not states with relatively lower state and local tax burdens have prospered compared to others.¹ The study was divided into two parts--the first of which reviewed some of the literature devoted to investigations and articles concerning the subject. The remainder of the study was an empirical inquiry which attempted to determine through the use of statistical methods whether variations in state and local tax burdens are associated with interstate variations in economic growth.

The effects of state and local taxation and the preferential tax treatment upon location decisions, business expansion, and state economic growth have resulted in the production of a host of studies, articles, monographs, and books addressed to the subject. The advocates have employed a variety of methods which include both empirical and theoretical approaches--with which to arrive at their conclusions.

1. William R. Ingram, The Effects of State Taxation on State Economic Growth, unpublished M.A. thesis, University of Montana, Missoula, Montana, 1966.

One type of empirical approach employs questionnaires to ascertain the determinants of firm expansion or relocation. Questionnaires in some instances are specifically designed to determine the influence of taxes upon business expansion or locational decisions. In other cases, a large number of considerations are listed and the firm is asked to rank each in order of the importance it plays in decision making.

Another empirical approach uses statistical analysis to determine the relationship between state and local tax burdens and economic growth. This technique normally involves the establishment of certain measures of economic growth and tax burden for a given number of states. Then, some sort of statistical comparison is made to determine whether or not a significant correlation may be shown to exist between economic growth and the level of state and local taxation. Some of these undertakings are definitive tax burden-economic growth inquiries. Others are addressed to the broader problem of determining the relationship between several presumed economic growth determinants and one or more measures of economic growth.

A third approach, which may be either theoretical or empirical in nature, involves the use of cost analysis in an effort to show whether or not state and local taxes, as elements of cost, are large enough to play a significant role in influencing decisions concerning firm expansion or relocation. Some studies use actual firms operating in more than one state. Others set up hypothetical firms in a variety of localities and states where the tax structures are different, and then attempt to compute the tax burden in each instance in relation to total cost, total value added, operating revenues, or profit. These tax burden values may then be related to the level of industrial development of each state to determine whether "high" business taxes have restricted economic growth.

Investigations by these various methods have resulted in conflicting conclusions concerning both the effects of state and local tax burdens upon business expansion and economic growth, and the validity and wisdom of the competition in which state and localities have engaged in an effort to attract and hold industry. A few of the investigators conclude that businessmen make decisions on the basis of tax costs and/or incentives--and that state economic growth is retarded where taxes are "higher." However, the preponderance of analytical studies agree that locational decisions are made for more fundamental reasons--and that state economic growth is not demonstrably associated with differentials in state and local taxes.²

-
2. The following serious studies are examples of those that agree that state and local tax burden differentials are not reliable predictors of state economic growth differentials: William D. Ross, "Tax Concessions and Their Effect," National Tax Association Proceedings, 1957, pp. 216-225; C. C. Bloom and A. A. Montgomery, State and Local Tax Differentials and the Location of Manufacturing, (Iowa City: State University of Iowa, 1956); Jesse Burkhead and Donald C. Steele, "The Effect of State Taxation on the Migration of Industry," Journal of Business, Vol. XXIII (July 1950), pp. 167-172; and Marvin E. Lee, "Tax Incentives and the Industrialization of the Southeast," National Tax Association Proceedings, 1961, pp. 168-185. Joe S. Floyd is an example of the serious investigator who presents the opposite view, "The Effect of State and Local Taxes Upon the Selection of Industrial Locations," National Tax Association Proceedings, 1951, pp. 435-445.

With this background in mind, the authors set up a model for this study to be used in an empirical investigation of the subject--the results of which should either uphold or discredit the literature consensus. The model employs data from forty-eight states during each of two periods: 1947-1954 and 1954-1962. (Alaska and Hawaii are excluded because of the lack of data.) The two-period model should have proved meaningful where there are changes in state and local tax burdens from the first period to the second period that "might" have had significant influences on economic growth. The employment of a two-period analysis also permitted us to relate interstate economic growth differentials in the second period to the state and local tax burdens in the first period. An examination of the results were expected to reveal whether there is merit to the argument that tax burdens of an earlier period may have had significant effects upon the decisions of businessmen that did not "show up" until later.

The model measures growth through the use of three basic dependent variable groups: change in personal growth, change in value added by manufacture, and change in capital expenditures by manufacturers for new plant and equipment. A further breakdown of these dependent variable groups results in a total of eighteen specific variables which are used as indicators or indexes of state economic growth. (Table 1 lists these growth indexes.)

TABLE 1

IDENTIFICATION OF THE STATE GROWTH INDEXES

-
1. Total change in personal income, by states, 1947-1954.
 2. Total change in personal income, by states, 1954-1962.
 3. Per capita change in personal income, by states, 1947-1954.
 4. Per capita change in personal income, by states, 1954-1962.
 5. Percentage change in personal income, by states, 1947-1954.
 6. Percentage change in personal income, by states, 1954-1962.
 7. Total change in value added by manufacture, by states, 1947-1954.
 8. Total change in value added by manufacture, by states, 1954-1962.
 9. Per capita change in value added by manufacture, by states, 1947-1954.
 10. Per capita change in value added by manufacture. by states, 1954-1962.
 11. Percentage change in value added by manufacture, by states, 1947-1954.
 12. Percentage change in value added by manufacture. by states 1954-1962.
 13. Total change in capital expenditures by manufacturers for new plant and equipment, by states, 1951-1954.
 14. Total change in capital expenditures by manufacturers for new plant and equipment, by states, 1954-1962.

TABLE 1--Continued

-
15. Per capita change in capital expenditures by manufacturers for new plant and equipment, by states, 1951-1954.
 16. Per capita change in capital expenditures by manufacturers for new plant and equipment, by states, 1954-1962.
 17. Percentage change in capital expenditures by manufacturers for new plant and equipment, by states, 1951-1954.
 18. Percentage change in capital expenditures by manufacturers for new plant and equipment by states, 1954-1962.
-

The independent variables (tax burden indexes) of the model are divided into two primary groups based on (1) the burden of state and local taxes on the entire populace and (2) the burden of state business taxes. (State business taxes for the purpose of this inquiry include state corporate income taxes, license revenues collected from corporations in general, and license revenues not elsewhere classified.) In addition, a secondary group of variables comprises indexes which represent the burden of specific state tax collections and also the burden which may result from the very existence of particular state taxes. In order to afford an analysis of reasonable breadth, we formulated twenty-six independent variables within these broad groups of presumed "determinants" of state economic growth. (Table 2 lists these state and local tax burden indexes.)

TABLE 2

IDENTIFICATION OF THE STATE AND LOCAL TAX BURDEN INDEXES

-
1. Total state and local taxes for each state for 1953.
 2. Total state and local taxes for each state for 1953 plus 1958.
 3. Total state and local taxes for 1953 as a percent of total personal income for 1953, by states.
 4. Total state and local taxes for 1953 as a percent of total personal income for 1953--plus total state and local taxes for 1958 as a percent of total personal income for 1958, by states.
 5. Per capita state and local taxes for each state for 1953.
 6. Per capita state and local taxes for 1953--plus per capita state and local taxes for 1958, by states.
 7. Total state and local taxes for 1953 as a percent of total personal income for 1953 divided by per capita personal income for 1953, by states.

TABLE 2--Continued

8. Total state and local taxes for 1953 as a percent of total personal income for 1953 divided by per capita personal income for 1953--plus total state and local taxes for 1958 as a percent of total personal income for 1958 divided by per capita personal income for 1958, by states.
9. Total state business taxes for each state for years 1947 through 1954.
10. Total state business taxes for each state for years 1954 through 1962.
11. Total state business taxes for years 1951 through 1954 as a percent of capital expenditures by manufacturers for new plant and equipment for years 1951 through 1954, by states.
12. Total state business taxes for years 1954 through 1962 as a percent of capital expenditures by manufacturers for new plant and equipment for years 1954 through 1962, by states.
13. Total state business taxes for years 1947 plus 1949 through 1954 as a percent of value added by manufacture for years 1947 plus 1949 through 1954, by states
14. Total state business taxes for years 1954 through 1962 as a percent of value added by manufacture for years 1954 through 1962, by states.
15. Total state and local property taxes for 1953 as a percent of total personal income for 1953, by states.
16. Total state and local property taxes for 1953 as a percent of total personal income for 1953--plus total state and local property taxes for 1958 as a percent of total personal income for 1958, by states.
17. Total state general sales taxes for years 1947 through 1954 as a percent of total personal income for years 1947 through 1954, by states.
18. Total state general sales taxes for years 1954 through 1962 as a percent of total personal income for years 1954 through 1962, by states.
19. Total state personal income taxes for years 1947 through 1954 as a percent of total personal income for years 1947 through 1954, by states.
20. Total state personal income taxes for years 1954 through 1962 as a percent of total personal income for years 1954 through 1962, by states.
21. Existence or nonexistence of a state personal income tax in 1947, by states.
22. Existence or nonexistence of a state personal income tax in 1955, by states.
23. Existence or nonexistence of a state general sales tax in 1947, by states
24. Existence or nonexistence of a state general sales tax in 1955 by states
25. Existence or nonexistence of a state corporate income tax in 1947, by states.

TABLE 2--Continued

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26. Existence or nonexistence of a state corporate income tax in 1955, by states.
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With minor exceptions, "basic" data were obtained from United States Bureau of the Census documents. These "basic" data were transferred to IBM cards and subsequently employed in the University of Montana IBM 1620 computer to calculate the growth index values (dependent variables) and the tax burden indexes (independent variables).³

Employing these dependent and independent variables, we set up various hypotheses and tested each for validity. Three sets of computations were made to test the validity of each proposition: (1) a dependent variable of the first period was related to an independent variable of the first period, (2) a dependent variable of the second period was related to an independent variable of the second period, and (3) the dependent variable employed in the second test was related to the independent variable employed in the first test. The methodology basically involves simple correlation analysis. Each test of validity involves determining the variation in the state growth index that is associated with the variation in the tax burden index. In other words, the result of the correlation computation provided us with a measure of the closeness of the relationship between the dependent and independent variables. Correlation analysis does not imply a functional relationship--only some relationship. It seeks to discover if a mutual variation exists, but it does not suggest that variation in the state growth variables are caused by variations in the tax burden indexes, or vice versa.

Apart from the expected direct association between the absolute state growth variables and the absolute tax burden variables, the results of the investigation failed to provide evidence of a reliable relationship between differentials in state and local tax burdens and differentials in state economic growth. (The reader is referred to the appendix of this paper for a description of the specific findings and a complete list of correlation coefficients.) The same conclusion is inferred from the results whether the computations involve independent variables representing aggregate state and local tax collections, state business tax collections, state general sales tax collections or state personal income tax collections.

The high direct associations revealed in the correlations between absolute tax variables and absolute growth variables were envisioned. Large industrialized states have such an economic headstart that they grow more rapidly on an absolute

-
3. An averaging technique, which is employed in the computation of the growth indexes, partially eliminates the possibility that unusual circumstances in any particular year in any state will skew the results, thus making them less comparable with values computed for other states. For example, in the first period the change in total personal income is calculated by subtracting the average total personal income for 1946-47-48 from the average total personal income for 1953-54-55. Similar averaging techniques are employed to calculate other growth index values.

basis than do less industrialized states, and at the same time exact a greater quantity of tax revenue than do the latter. Since large size is compatible with large change in both the dependent and independent variables the bias towards positive correlation is apparent. These results in no way prejudice the overall conclusions that state and local tax burdens are of little value as predictors of state economic growth.

Of the 87 correlations involving rate of change and ratio variables, only seven resulted in coefficients which were statistically significant at the 95 percent level--i.e., could be identified with 95 percent confidence. (In other words the coefficients were greater than could be expected by chance 95 out of 100 times.) Each of the seven statistically significant coefficients (two of which are positive and five negative) is associated with separate propositions. The coefficient of correlation in each instance is of moderate value ranging from a high of 56.0 percent to a low of -29.4 percent. None of the significant coefficients resulting from a test of a given hypothesis is supported by the two accompanying tests of the same hypothesis. In fact, from the sample of 99 correlations (12 correlations involving absolute variables and 87 correlations involving rate of change and ratio variables), the few that are statistically significant and unexplained (seven) barely exceed the number (five) which would have arisen due to pure chance.

Our analysis provides no evidence that higher than average aggregate state and local taxes have restricted state economic growth, or that lower than average taxes have encouraged growth. Our findings contradict the contention that manufacturing activity flourishes and business investments are greater where industrial tax loads are lower. The overall results indicate that business locational decisions are not made on the basis of state business tax differentials (such as existed during the period of our study). The influence of tax differences are likely to be relatively small when compared to more fundamental considerations such as markets and the deviations in labor and raw material costs.

Why is it that differentials in state and local tax burdens are not inversely associated with differentials in state economic growth? One presumption is that state and local tax collections, at the levels which existed during the periods of time under study, were so relatively small that they were unimportant expenditures (costs) to both the household sector and the business sector. An accompanying presumption involves the state government as a business intermediary. A considerable portion of state tax revenues provides useful services and facilities for businesses and households. The provision of these services is likely to increase the real income of the citizens in the state. The private sector enjoys services and facilities according to the amount of the tax collections: those states with relatively larger tax burdens provide their citizens with more and better services and facilities. And, as a state becomes more productive, its citizens demand more and more from the state government in the form of services and facilities, such as, for example, better administration, schools, and mental institutions.

In summary, existing level taxes do not appear to deter a state's economic growth; the more taxes paid in a given state, the more services and facilities the state can afford to provide. These services are likely to be worth their costs to businesses, and thus the firms are likely not to object to paying their share of the costs.

APPENDIX

SPECIFIC FINDINGS AND CORRELATION COEFFICIENTS

1. High total state and local tax burdens upon the entire populace are associated with rapid absolute growth. This was the result expected when we tested the general proposition that the total quantity of economic expansion is greater in states where the total tax bill is lower.

a b c	Correlation coefficients ¹		
	First period	Second period	Time lag
	.936	.960	.946
	.894	.901	.801
c	.081	.471	.465

2. There is little evidence of an association between the deviations in the per capita growth indexes and deviations in state and local taxes as a percent of total personal income.

a b c	Correlation coefficients		
	First period	Second period	Time lag
	-.538	.018	.070
	-.560	-.128	-.116
c	.099	-.257	-.190

3. Only a minor fraction of the deviations in the rate of growth indicators are statistically explained by the deviations in per capita state and local taxes.

a b c	Correlation coefficients		
	First period	Second period	Time lag
	.154	.218	.282
	.151	-.118	-.046
c	.062	-.098	-.062

-
1. The .95 level of significance which is employed in this study requires (for 48 observations) a coefficient of correlation of t .2835, and (for 44 observations) a coefficient of correlation of t .297. Computations employed in Specific Findings 1, 2, 3, 4, 5, 9, and 10 involve 48 observations. Computations employed in Specific Findings 6, 7, 8, and 11 involve 44 observations. Specific Findings 12 and 13 result from a simple ordering process; no statistical correlation is involved.
 2. The symbol a stands for a correlation between the personal income index and the tax burden index. The symbol b stands for a correlation between the value added by manufacture index and the tax burden index. The symbol c stands for a correlation between the capital expenditure by manufacturers for new plant and equipment index and the tax burden index. The reader may determine whether the growth index is an absolute, per capita, or percentage value by referring to the specific finding. The description of the tax burden index is also given in the specific findings.

4. There is no reliable relationship between differentials in state-by-state rates of growth and differentials in state and local taxes as a percent of total personal income.

	Correlation coefficients		Time lag
	First period	Second period	
a	-.314	.185	.207
b	-.010	.205	.234
c	.049	.096	.122

5. State by state deviations in the rate of growth indexes are not associated with deviations in indexes which represent total state and local taxes as a percent of total personal income divided by per capita personal income.

	Correlation coefficients		Time lag
	First period	Second period	
a	-.427	.048	.065
b	-.079	.278	.270
c	-.0062	.187	.186

6. Our results discredit the naive proposition that economic expansion and growth on an absolute basis is greater where total state business taxes are lower; the reverse proposition is strongly supported.

	Correlation coefficients		Time lag
	First period	Second period	
a	.664	.868	.703
b	.652	.750	.601
c	-.184	.468	.214

7. There is little evidence of an association between differentials in per capital growth variables and differentials in total state business taxes as a percent of capital expenditures by manufacturers for new plant and equipment.

	Correlation coefficients		Time lag
	First period	Second period	
a	-.00045	.219	.148
b	-.266	.075	.151
c	-.067	.253	.308

8. Variations in the rate of growth variables are not reliably associated with variations in variables which represent total state business taxes as a percent of value added by manufacture.

	Correlation coefficients		Time lag
	First period	Second period	
a	-.044	.247	.288
b	.045	.242	.353
c	.202	.020	.028

9. The level of total state and local property taxes as a percent of total personal income is a very insensitive barometer of state-by-state rate of growth differentials.

	Correlation coefficients		
	First period	Second period	Time lag
a	-.294	.036	.083
b	-.131	.060	.080
c	.094	.072	.087

10. Differentials in state-by-state rates of growth are not reliably related to differentials in total state general sales taxes as a percent of total personal income.

	Correlation coefficients		
	First period	Second period	Time lag
a	-.037	.115	.068
b	.193	.177	.173
c	.026	-.041	-.0087

11. Virtually none of the deviations in the rate of growth variables are associated with the deviations in the variables which represent total state personal income taxes as a percent of total personal income.

	Correlation coefficients		
	First period	Second period	Time lag
a	-.037	.014	.026
b	-.155	.0047	.038
c	-.030	.117	.091

12. Changes in per capita personal income are not related to the very existence of either a state personal income tax or a state general sales tax.

13. Changes in per capita value added by manufacture are not associated with the very existence of a state corporate income tax.

APPENDIX 7
THE COMPLIANCE AND ADMINISTRATIVE
COSTS OF MONTANA TAXES

by Michael N. Killworth and John H. Wicks

INTRODUCTION

Administrative and compliance costs are two criteria by which the desirability of a tax may be considered. Administrative costs are those costs incurred by government in seeing that the tax laws are properly enforced and in actually collecting the tax revenue. Compliance costs are those costs borne by taxpayers, both individuals and business firms, in keeping records to determine tax liability, filing the necessary returns, and remitting the tax payment. The purpose of this study is to estimate the administrative and compliance costs of most of the state and local taxes used in Montana. It is hoped that the information derived from these estimates will be useful in studying the present Montana tax system and in recommending any changes that might be made to it.

METHOD

This study is of an empirical nature in the sense that all but a small portion of the information was gathered by use of questionnaires or through personal interview. The specific methods used to estimate costs for the various taxes as well as information concerning sample sizes and response rates are discussed within the section on each tax.

MONTANA PROPERTY TAX

All property in Montana is subject to taxation unless it has been exempted by some special legislative arrangement. The rate of the property tax depends on the total of all lawful levies by the state and various local governments on the property. The county assessor in each county is responsible for assessing all taxable property in his county with the exception of that property which is required to be assessed by the State Board of Equalization. Each person owning or controlling property in the state subject to taxation is required to file a statement listing all such property. In many cases, the assessor actually performs this function. Property taxes are payable in two semi-annual installments. With the exception of some personal property, taxes become a lien on real estates owned by the taxpayer as of the first Monday in March. Those personal property taxes not secured by a lien are due when the tax is assessed.

The Compliance Costs of the Montana Property Tax

Compliance cost information concerning the Montana property tax was obtained by sending questionnaires to two samples. One sample consisted

of 1000 individuals; the other questioned 500 business firms. Tables 1 and 2 below summarize information about the degree of successful response experienced with each sample group.

TABLE 1

RESPONSE RATE FOR VARIOUS QUESTIONS CONCERNING THE MONTANA PROPERTY TAX SENT TO A SAMPLE OF 1000 INDIVIDUAL TAXPAYERS

Type of Property Tax	Sample Size	Number of Usable Responses	Percent of Usable Responses
Real Property Tax	1000	342	34.2
Motor Vehicles	1000	386	38.6
Personal Property Other than Motor Vehicles	1000	227	22.7
Average			31.6

It can be seen from Table 1 that while the rate of response from the sample of private taxpayers was not high, the number of usable responses in each case was sufficiently large to provide meaningful results.

TABLE 2

RESPONSE RATE TO QUESTIONS CONCERNING THE MONTANA PROPERTY TAX SENT TO A SAMPLE OF BUSINESS FIRMS

Type of Business	Sample Size	Number of Usable Responses	Percent of Usable Responses
Partnerships and Sole Proprietorships	300	44	15
Corporations	200	28	14
All Businesses Combined	500	71	14

There were three questions concerning the property tax on each questionnaire. The figures presented represent the average number of usable responses to all three questions.

For the business samples, a fairly low but adequate number of responses was received.

Compliance Costs to Individuals

Most of the compliance costs to individuals from property taxation are the result of the individuals' compliance time. The dollar amount of the

costs will therefore depend on the value assigned to the taxpayers' time. Several different methods were used to assign a value to this time. These methods are explained below and the results obtained from using them are shown in Tables 3 through 5.

In each of the tables the reader may note that the compliance cost of the real property tax is stated as negligible. This is because only nine persons out of 342 paying the tax reported any compliance cost at all. The average compliance cost was thus negligible when compared to the average amount of tax paid.

The first method of assigning a value to compliance time was to assign a \$2 per hour value to all time estimates. Table 3 shows the compliance costs of the property tax using \$2 per hour time value. The average time in paying the motor vehicle tax was 1.14 hours while average tax paid was \$82.50. Using the \$2 per hour time value, average compliance cost was 2.76 percent of average tax paid. It is important to note that the amount of motor vehicle tax paid in each case includes both the annual license fee as well as the property tax. It was impossible to separate them as both taxes are paid at the same time. For the tax on personal property other than motor vehicles, the average amount of tax paid was \$94.20. With the \$2 per hour time value, average cost was thus 1.60 percent of average tax paid.

TABLE 3

COMPLIANCE COSTS OF THE MONTANA PROPERTY TAX FOR A RANDOM SAMPLE OF PRIVATE TAXPAYERS USING A \$2 PER HOUR VALUE FOR ALL TIME ESTIMATES

Type of Tax	Sample Size	Average Amount of Tax Paid	Average Cost	Cost as a Percentage of Tax
Real Property Tax	342	\$507.00	Negligible ¹	---
Motor Vehicles	386	82.50	\$2.28	2.76
Personal Property Other than Motor Vehicles	227	94.20	1.50	1.60

¹Only nine persons out of the entire sample of taxpayers reported a compliance cost for the tax on real property.

A second method of assigning a value to compliance time was to use each individual's estimate as to the value of his own time. The cost estimates using this time value are presented in Table 4. A third and final method for determining the hour value of compliance time was to divide gross annual income for each individual by the number of hours worked per year. Table 5 presents the costs using this last method of time valuation.

TABLE 4

COMPLIANCE COST OF THE MONTANA PROPERTY TAX FOR A SAMPLE OF PRIVATE TAXPAYERS USING THE INDIVIDUAL'S ESTIMATE AS TO THE VALUE OF HIS OWN TIME

Type of Tax	Sample Size	Average Amount of Tax Paid	Average Cost	Cost as a Percentage of Tax
Real Property Tax	342	\$507.00	Negligible ¹	---
Motor Vehicles	96	73.68	\$3.82	5.19
Personal Property Other than Motor Vehicles	73	108.41	2.25	2.08

¹Only nine persons paying the tax on real property reported any cost in complying with the tax.

TABLE 5

COMPLIANCE COST OF THE MONTANA PROPERTY TAX FOR A SAMPLE OF PRIVATE INDIVIDUALS USING EACH INDIVIDUAL'S AVERAGE HOURLY WAGE FOR A TIME VALUE

Type of Tax	Sample Size	Average Amount of Tax Paid	Average Cost	Cost as a Percentage of Tax
Real Property Tax	342	\$507.00	Negligible ¹	---
Motor Vehicles	96	73.68	\$5.67	7.69
Personal Property Other than Motor Vehicles	73	108.41	4.30	3.97

¹Only nine persons paying the tax on real property reported any cost in complying with the tax.

The reader should note that the sample sizes used for the personal property taxes in Tables 4 and 5 are smaller than those in Table 3. These samples are actually random samples of the larger samples in Table 3. The smaller samples were selected in a manner which would make the data much easier to handle but in no way impair its meaningfulness. The compliance cost as a percentage of tax paid for the motor vehicle taxes was 5.19 percent when the individual's estimate of his own time was used and 7.69 percent when the average hourly earnings were used. The compliance cost as a percentage of tax paid for personal property other than motor vehicles was much less than for the motor vehicles tax. The cost was 2.08 percent of tax when the individual's estimate as to the value of his own time was

used and 3.97 percent using average hourly earnings. For all property taxes taken together, except those on motor vehicles, the average compliance cost would be less than one percent of tax paid, no matter which time value is used. In comparison to other taxes on private individuals, the property tax is inexpensive to comply with.

Compliance Costs to Business Firms

The questionnaires sent to business firms requested estimates of the labor costs or any other costs in keeping records, reporting property subject to taxation, and remitting tax payment. On the basis of these estimates the property tax compliance costs were calculated for sole proprietorships and partnerships, corporation, and all business firms together. Real and property taxes were combined in these calculations. Table 6 presents the results.

TABLE 6
COMPLIANCE COST TO VARIOUS BUSINESS FIRMS FROM THE MONTANA
PROPERTY TAX

Type of Business	Average Number of Usable Responses	Mean Cost	Mean Tax Paid	Cost as a Percentage of Tax
Partnerships and Sole Proprietorships	43	\$20.14	\$1174.23	1.72
Corporations	28	29.10	3515.86	.83
All Business Firms Combined	71	23.56	1930.75	1.22

The reader may note that the average compliance cost as a percentage of tax paid was 1.72 percent for sole proprietorships and partnerships and .83 percent for corporations. The compliance costs of the Montana property tax are thus quite low for business firms as well as for individuals.

Administrative Costs of the Montana Property Tax

The administrative cost of the Montana property tax was measured through personal interview with State Board of Equalization personnel and by sending questionnaires to the various county administrative agencies in each of the state's 56 counties. For ease in comparison, the counties were divided into three groups according to taxable valuation. The first group comprises the five counties with the largest taxable valuation. The second group is made up of the next 23 counties by taxable valuation, while the third contains the 28 counties with the smallest taxable valuation. The questionnaires were sent to the offices of the county commissioners, clerk and recorders, treasurers, and assessors in each county. The various response rates are shown in Tables 7 through 9.

TABLE 7

RESPONSE RATE OF FOUR COUNTY OFFICES IN EACH OF MONTANA'S FIVE
LARGEST COUNTIES BY TAXABLE VALUATION TO A QUESTIONNAIRE ON
PROPERTY TAX ADMINISTRATIVE COSTS

County Office	Real Property T a x		Motor Vehicles		Personal Property Other Than Motor Vehicles	
	Number of	Rate	Number of	Rate	Number of	Rate
	Usable Responses	of Response	Usable Responses	of Response	Usable Responses	of Response
Commissioners	4	80%	4	80%	4	80%
Clerk & Recorder	4	80	3	60	4	80
Treasurer	3	60	3	60	2	40
Assessor	3	60	3	60	2	40
Average:		70%		65%		60%

The administrative cost estimates for the property tax represent the portion of each county office's expenditures for the administration of each type of property tax for the fiscal year ending June 30, 1965. Because of the nature of the governmental record keeping, no attempt was made to include any administrative costs not reflected in the annual budgets of the agencies involved. Tables 10 through 12 present the estimates of administrative costs at the county level for the tax on real property, motor vehicles, and personal property other than motor vehicles, respectively.

TABLE 8

RESPONSE RATE OF FOUR COUNTY OFFICES TO A QUESTIONNAIRE ON PROPERTY
TAX ADMINISTRATIVE COSTS IN THE COUNTIES WITH THE SIXTH TO 33RD
LARGEST AMOUNTS OF TAXABLE VALUATION

County Office	Real Property T a x		Motor Vehicles		Personal Property Other than Motor Vehicles	
	Number of	Rate	Number of	Rate	Number of	Rate
	Usable Responses	of Response	Usable Responses	of Response	Usable Responses	of Response
Commissioners	12	52%	8	35%	11	48%
Clerk & Recorder	13	57	11	48	12	52
Treasurer	15	65	15	65	14	61
Assessor	18	78	17	74	18	78
Average		63%		56%		60%

TABLE 9

RESPONSE RATE OF FOUR COUNTY OFFICES TO A QUESTIONNAIRE ON PROPERTY TAX ADMINISTRATIVE COSTS IN THE 28 COUNTIES WITH THE LEAST TAXABLE VALUATION

County Office	Real Property T a x		Motor Vehicles		Personal Property Other than Motor Vehicles	
	Number of Usable Responses	Rate of Response	Number of Usable Responses	Rate of Response	Number of Usable Responses	Rate of Response
Commissioners	15	54%	6	21%	16	57%
Clerk & Recorder	17	61	11	39	17	61
Treasurer	16	57	15	54	16	57
Assessor	21	75	21	75	20	71
Average		62%		47%		62%

TABLE 10

ADMINISTRATIVE COST ESTIMATES OF FOUR RESPONDING COUNTY LEVEL OFFICES IN ADMINISTRATION OF THE MONTANA TAX ON REAL PROPERTY

Counties by Taxable Valuation	Commis- sioner Average Cost	Clerk & Recorder Average Cost	Treasurer Average Cost	Assessor Average Cost	Total Cost	Average Revenue	Cost as a Percent- age of Revenue
Five Counties with largest Assessed Valuation	\$5,353	\$3,967	\$4,507	\$44,950	\$58,757	\$5,537.023	1.06%
Next 23 Coun- ties by Assessed Valuation	3,360	3,847	9,847	9,704	26,758	1,378,289	1.94
28 Counties with least Assessed Valuation	788	1,696	5,576	5,430	13,490	517,053	2.61

The figures shown in Table 10 indicate that the administrative cost of the real property tax is not high. The cost was 1.06 percent of tax revenue for the five largest counties in the state by taxable valuation, 1.94 percent of revenue for the 23 middle-sized counties, and 2.61 percent for the 28 smallest counties. The data presented, however, do not include all the costs of administering the tax on real property, since these tables do not include the administrative work performed by the State Board of equal-

ization to recent expenditures being made by the various counties for reclassification of property. (Some property, both real and personal, is assessed by the State Board of Equalization and apportioned to various counties. Board personnel estimate that the administrative cost of performing this function was about \$40,000 last year -- a cost which could be included in a more accurate statement of administrative costs.)

A second reason that the administrative cost estimates in Table 10 are too low is that the estimates do not include expenditures for reclassification. Most counties in the state are now permanently involved in some form of reclassification of real property. Through telephone interviews with about 20 county officers, it was determined that the administrative procedures of reclassification vary greatly from county to county. No uniform and accurate cost estimates were therefore possible. It is important to note, however, that reclassification expenditures are a legitimate cost of administering the tax.

Motor Vehicles

The information presented in Table 11 combines the property tax on motor vehicles with the annual license fee. Since both taxes are administered together, it was impossible to separate them. It can be seen from the table that for the five counties with the greatest assessed valuations, administrative cost was 5.95 percent of revenue. It was 8.65 percent for the 23 middle-sized counties, and 11.24 percent for the 28 counties with the smallest assessed valuation. These figures suggest that collection efficiency decreases with the amount of assessed value in a county. For the middle-sized and smaller counties especially, the administrative costs were very high.

TABLE 11

ADMINISTRATIVE COST ESTIMATES OF FOUR RESPONDING COUNTY LEVEL OFFICES INVOLVED IN ADMINISTRATION OF THE MONTANA MOTOR VEHICLE ANNUAL LICENSE FEE AND PROPERTY TAX

Counties by Taxable Valuation	Commis- sioner Average Cost	Clerk & Recorder Average Cost	Treasurer Average Cost	Assessor Average Cost	Total Cost	Average Revenue	Cost as a Percent- age of Revenue
Five Counties with largest Assessed Valuation	\$174	\$ 625	\$30,111	\$9,488	\$40,398	\$679,191	5.95%
Next 23 Counties by Assessed Valuation	602	1,429	5,278	4,515	11,822	136,656	8.65
28 Counties with least Assessed Valuation	146	986	3,182	1,661	5,975	53,146	11.24

TABLE 12

ADMINISTRATIVE COST ESTIMATES OF FOUR RESPONDING COUNTY LEVEL OFFICES
INVOLVED IN ADMINISTRATION OF THE MONTANA TAX ON PERSONAL PROPERTY
OTHER THAN MOTOR VEHICLES

Counties by Taxable Valuation	Commis- sioner Average Cost	Clerk & Recorder Average Cost	Treasurer Average Cost	Assessor Average Cost	Total Cost	Average Revenue	Cost as a Percent- age of Revenue
Five Counties with largest Assessed Valuation	\$268	\$544	\$11,631	\$13,780	\$26,223	\$453,621	5.78%
Next 23 Counties by Assessed Valuation	509	918	3,487	6,837	11,751	146,136	8.03
28 Counties with least Assessed Valuation	285	629	1,625	3,025	5,564	53,210	10.46

Other Personal Property

As shown by Table 12 above, the administrative cost of the Montana taxation of personal property other than motor vehicles was 5.78 percent of revenue collected for the five largest counties in the state according to taxable valuation, 8.03 percent for the 23 middle-sized counties and 10.46 percent for those 28 counties with the smallest assessed valuation. As with the real property tax and the taxes on motor vehicles, the counties with the greatest amounts of assessed valuations appeared to experience the greatest administrative efficiency. The cost estimates for the personal property tax other than motor vehicles tend to understate total administrative costs because no attempt was made to include administrative functions performed by the State Board of Equalization or the small portion of county reclassification expenditures that go for personal property. Generally, the administrative cost of this tax was moderately high.

For all property taxes other than motor vehicles, the average administrative cost was about 2.8 percent. The average compliance cost of property taxes on other than motor vehicles was .8 percent.

MONTANA PERSONAL INCOME TAX

The Montana personal income tax is imposed on the entire net income of residents, and nonresidents are taxed on the income they earn in the state. The rates vary from 1.1 percent for the first \$1000 of taxable income to

7.9 percent of all taxable income in excess of \$7000. Individuals' returns are filed annually with the State Board of Equalization and tax remittance is expected to accompany the return. All taxpayers whose incomes are not subject to withholding, except farmers and ranchers, must file declarations of estimated tax liability with the Board by April 15. Information returns covering payments of taxable income in excess of \$500 to any individual must be filed with the Board by employers. In addition to the above requirements, employers must withhold from wages an amount which is determined by the Board. Withholding returns and payments must be made quarterly but if quarterly taxes withheld total less than \$10, an employer may make only one annual return. All employers withholding wages must submit an annual summary of withholding from each employee to the Board and to the employee.

Compliance Costs of the Personal Income Tax

The compliance cost of the Montana personal income tax was estimated by sending questionnaires to a sample of 1000 taxpayers which was stratified by taxpayer income. From this sample, 421 usable returns were received for a response rate of about 42 percent -- response more than adequate to provide meaningful results. The compliance cost estimates include the cost of keeping the necessary records to determine tax liability, preparing the returns or having it done by a professional, and submitting the tax payment. Since the value assigned to compliance time is an important factor in determining total compliance cost, two methods were used to assign a value to this time. First, costs were calculated using each individual's estimate of the value of his own time. A second method was to use each individual's average annual wage. The compliance costs using each individual's estimate of his own time value are presented in Tables 13 and 14. The second set of cost estimates using each individual's average hourly wage are not presented. Using the second time value did not change the relationship between costs for different income and occupation groups, but it did make the costs somewhat higher in each case. The compliance costs are presented by income category in Table 13 and by occupation in Table 14. It can be seen that compliance costs varied greatly by both occupation and income category and that in many cases the costs were extremely high in relation to tax paid.

An analysis of the variance between the means of record keeping costs, filing costs, and remittance costs was made to determine if there was significant overall variance among the means for different occupations and income categories. It was found that by income category, the differences for average record keeping and average filing costs were insignificant, but the variation in average remittance cost was significant to 99.9 percent -- in other words there was more variation among occupations and income categories in the amount of remittance cost than could be expected by chance 99.9 percent of the time. For the means by occupation, variation in record keeping cost was insignificant, but the overall variation in filing and remittance cost was significant at the 99.9 percent level.

For all individuals taken together, the coverage compliance cost from the personal income tax was 14.9 percent of tax paid.

TABLE 13

COMPLIANCE COST OF THE MONTANA PERSONAL INCOME TAX PRESENTED FOR EIGHT DIFFERENT OCCUPATION CATEGORIES AS A PERCENTAGE OF TAX PAID

Occupation	Average Record Keeping Cost	Average Filing Cost	Average Remittance Cost	Total Average Cost	Average Total Cost Average Tax Paid
Farming and Ranching	\$ 6.75	\$ 4.94	\$ 8.74	\$20.43	5.1%
Professional	21.32	18.03	7.54	46.89	7.2
Self-employed other than Professional	1.39	10.00	16.83	28.22	4.3
Managerial	13.21	23.12	13.08	49.41	12.2
White Collar Service and Clerical	5.66	6.69	1.08	13.43	24.2
Skilled and Unskilled Labor	8.93	6.60	1.41	16.94	26.4
Salesman	0.00	3.50	7.79	11.29	4.3
Other	0.00	2.75	34.19	36.94	2.1

TABLE 14

COMPLIANCE COST OF THE MONTANA PERSONAL INCOME TAX PRESENTED FOR SEVEN DIFFERENT INCOME CATEGORIES AS A PERCENTAGE OF TAX PAID

Occupation	Average Record Keeping Cost	Average Filing Cost	Average Remittance Cost	Total Average Cost	Average Total Cost Average Tax Paid
\$ 0 - 3,000	\$ 0.00	\$ 7.13	\$ 5.20	\$12.33	189.4%
3,000 - 5,000	0.00	4.86	2.70	7.56	27.5
5,000 - 7,500	5.39	5.22	1.76	12.37	21.8
7,500 -10,000	15.33	9.05	2.50	26.88	25.4
10,000 -15,000	7.93	12.40	4.99	25.32	4.4
15,000 -25,000	21.24	25.44	8.86	55.54	10.6
25,000 -50,000	15.22	14.90	20.13	50.25	4.4

Cost of Withholding the Montana Personal Income Tax

The compliance cost of withholding the Montana personal income tax was measured by sending questionnaires to a random sample of 500 business firms. The response rate of 74 usable returns was not good, but it was adequate. The average compliance cost of withholding was \$62.44 while mean tax withheld was \$755.20. This compliance cost figure amounts to 8.27 percent of tax withheld.

Administrative Cost of the Personal Income Tax

The administrative cost of the Montana personal income tax was estimated by the State Board of Equalization, which administers the tax, to be \$357,626 last fiscal year. The revenue collected during the same period of time was \$16,657,000 so that administrative cost was 2.10 percent of revenue. It would appear that the personal income tax is not expensive to administer.

CORPORATION LICENSE TAX

Corporations in the state are required to pay a license tax on all income earned in the state. The rate of the tax is .025 percent of net income with a minimum tax of \$10. The tax is based on net income, (i.e., federally adjusted gross less deductions, and returns are required to be filed annually with the State Board of Equalization. Tax payment is made to the State Treasurer once a year.

Compliance Cost

Questionnaires were sent to 200 corporations in an attempt to measure the compliance cost of the Montana corporation license tax. Of these 200, only 25 usable questionnaires were returned. These 25 questionnaires did provide a sufficient amount of information to have some meaningful results. The mean compliance cost to the 25 reporting corporations was \$99.09, while the mean tax paid was \$886.39. Using these figures, average compliance cost was 10.16 percent of average tax paid. Since the standard deviation of the cost ratios was over twice the size of the mean itself., the 10.16 percent cost figure is not representative of many firms. On the average, however, the compliance cost of the tax seems to be quite high.

Administrative Cost

The administrative cost of the Montana corporation licence tax was estimated through personal interviews with State Board of Equalization personnel. This discussion indicated that the administrative cost of the tax was about \$26,140 for the fiscal year ending June 30, 1965, while revenue collected during the same period was \$5,871,000. Cost was therefore .4 percent of revenue. As with other administrative costs in this study, the cost estimates include only those administrative costs which are reflected in the expenditures of the agencies involved. From the information presented, it is apparent that the Montana corporation license tax is quite inexpensive to administer.

COMPLIANCE COSTS OF SPECIAL MONTANA LICENSE TAXES

Montana has numerous special license taxes which apply to various business firms in the state. Compliance cost questionnaires were sent to a random sample of taxpayers of each of these special license taxes. Questionnaires were sent to all sample numbers and if no response was received within three weeks, another questionnaire with a follow-up letter was sent. Table 15 summarizes the information concerning sample sizes as well as the number and rate of successful responses.

TABLE 15
SAMPLE SIZES AND QUESTIONNAIRE RESPONSE RATES OF BUSINESS FIRMS
PAYING MONTANA SPECIAL LICENSE TAXES

Name of Tax	Sample Size	Number of Returns	Percentage Returned	Number of Usable Returns	Percentage of Usable Returns
Insurance	39	32	82	21	54
Natural Gas	6	6	100	4	67
Electrical Energy	4	3	75	1	25
Micaceous Minerals	1	1	100	1	100
Oil Producers	24	13	54	9	37
Cement	21	12	57	6	29
Express Company	1	1	100	-- ^a	--
Pullman Company	1	1	100	-- ^a	--
Metalliferous Mines	9	4	44	2	22
Telegraph Company	1	1	100	-- ^a	--
Special Fuel Dealers	25	17	58	11	44
Telephone Company	14	8	57	7	50
Chain Store	30	12	40	4	13
Coal License	18	12	67	8	44
Special Fuel Users	25	12	48	9	36
Total	219	135		83	

^aResponses were received from these firms but they indicated the compliance cost from the Montana tax was impossible to estimate.

Average rate of return = 73%

Average Usable rate of return = 35%

The method used to calculate cost as a percentage of tax paid was to divide total compliance costs for all in the sample taxpayers by the total tax they remitted -- $\frac{\text{Cost}}{\text{Tax}}$. This calculation is much more meaningful in examining the impact of compliance costs on the entire group of taxpayers. Results of the study are presented below.

SEVERANCE TAXES

Montana has several severance taxes which are imposed on producers of natural resources in the state. These taxes are designed to compensate the state for removal of its limited supply of natural resources.

Coal Mines Licence Tax.

Coal mine operators in the state pay a tax on every ton of coal removed in excess of 50,000 tons. The coal must be marketable to be subject to the tax which has a rate of five cents per ton. Operators must file reports and make payment quarterly with the State Treasurer.

The compliance cost of the coal mines license tax was estimated by sending questionnaires to the eighteen firms currently paying the tax. Eight usable questionnaires were returned. Table 16 shows the cost estimates.

The sum of the costs divided by the total of taxes paid shows cost to be 79.72 percent tax paid. The average of costs as a percentage of tax for each firm is 42.24 percent. From these data, there appears to be no relationship between the amount of tax paid and compliance cost. All compliance costs reported were results of the necessity of keeping records for the tax. Apparently, most of the taxpayers involved felt the compliance cost of the coal mines license tax to be negligible.

TABLE 16

COMPLIANCE COST TO EIGHT BUSINESS FIRMS FROM THE MONTANA COAL MINES LICENSE TAX

Firm	Cost of Record Keeping	Filing and Remitting	Total Cost	Amount of Tax Paid	Cost as a Percentage of Tax
1	\$ 0 ^a	\$ 0	\$ 0	\$ 6	0
2	0 ^a	0	0	17	0
3	60	0 ^a	60	29	206.90
4	20	0 ^a	20	37	54.05
5	0 ^a	0	0	38	0
6	0 ^a	0	0	45	0
7	0 ^a	0	0	60	0
8	100	0	100	130	76.92
Total	\$180	0	\$180	\$362	

^aTaxpayer indicated that there was a cost but that he felt it was negligible.

$$\frac{\text{Cost}}{\text{Tax}} = 49.72\%$$

$$\frac{\text{Cost}}{\text{Tax}} = 42.24\%$$

Oil Producers License Tax

Production of oil in Montana is subject to a tax of two percent of the gross value of oil produced. In addition, a conservation tax of one quarter of one cent per barrel of oil produced in the state is also levied. The former tax is administered by the State Board of Equalization which requires quarterly reports and tax payments. The conservation tax is administered by the Oil and Conservation Commission which also requires quarterly reports and payments. The revenue from the conservation tax is used to finance the operations of the Commission. The administrative cost of the oil and gas conservation tax combined will be presented in a later section concerning the administrative costs of special Montana license taxes. No data concerning the compliance cost of this tax are available.

The compliance cost of the Montana oil producers license tax was measured by sending questionnaires to 24 taxpayers. Nine questionnaires returned were answered completely enough to be useful. The estimates are presented in Table 17.

TABLE 17

COMPLIANCE COSTS TO NINE BUSINESS FIRMS FROM THE MONTANA OIL PRODUCERS LICENSE TAX

Firm	Record Keeping	Filing & Remitting	Total Cost	Tax Paid	Cost as a Percentage of Tax
1	\$ 0 ^a	\$ 0	\$ 0	\$ 291	0%
2	0	25	25	992	2.52
3	0	25	25	9,000	.28
4	80 ^b	0	80	13,400	.60
5	500	250	750	17,593	4.26
6	0 ^a	750	750	43,592	1.72
7	100	50	150	71,445	.21
8	200	20	220	87,035	.25
9	<u>1,000</u>	<u>150</u>	<u>1,550</u>	<u>705,498</u>	.16
Total	\$1,880	\$1,270	\$3,150	\$948,846	

^aTaxpayer indicated that there was a cost but that he felt it was negligible.

^bBoth estimates for record keeping cost and filing and remitting are combined.

$$\frac{\text{Cost}}{\text{Tax}} = .33\%$$

$$\frac{\text{Cost}}{\text{Tax}} = 1.11\%$$

Total compliance cost divided by total tax paid was .33 percent. The average cost as a percentage of tax paid for each firm was 1.11 percent. The compliance costs as a percentage of tax vary significantly among firms. There appears to be little relationship between cost as a percentage of tax and the amount of tax paid. However, the three firms paying the largest amount of tax displayed the most efficiency in complying with the tax.

Cement Dealers License Tax

Firms manufacturing cement and allied products or importing them into the state are subject to the cement dealers license tax. The tax rate is four cents per barrel on cement or five cents per ton on cement plaster. In addition, all dealers are required to pay a one dollar license fee. Quarterly reports are required by the State Board of Equalization which administers the tax, and payments are to accompany the reports.

Questionnaires were sent to 21 taxpayers concerning the compliance cost of the cement license tax. Twelve were returned, and six were complete enough to be usable. Table 18 contains the data.

TABLE 18
COMPLIANCE COSTS TO SIX BUSINESS FIRMS FROM THE MONTANA CEMENT
DEALERS LICENSE TAX

Firm	Record Keeping	Filing and Remitting	Total Cost	Tax Paid	Cost as a Percentage of Tax
1	\$ 25	\$ 0	\$ 25	\$ 18	138.89%
2	0	100	10	25	40.00
3	0	0	0	75	0
4	10	10	20	319	6.27
5	0	0 ^a	0	40,761	0
6	<u>0</u>	<u>50</u>	<u>50</u>	<u>48,800</u>	.10
Total	\$35	\$70	\$105	\$89,998	

^aTaxpayer indicated that there was a cost but that he felt it was negligible.

$$\frac{\text{Cost}}{\text{Tax}} = .12\%$$

$$\frac{\text{Cost}}{\text{Tax}} = 30.87\%$$

The total of all compliance costs as a percentage of total taxes paid for all firms was .12 percent. The average of compliance cost as a percentage of tax paid for each individual firm was 30.87 percent. The latter figure is much larger than the former because firm number six paid over \$40,000 of tax, but reported negligible compliance costs. There appears to be some relationship between cost as a percentage of tax and tax paid, in that those firms paying small amounts of tax did not comply as efficiently as did those paying larger amounts of tax.

The data do suggest that compliance costs of the cement license tax are relatively expensive when the amount of tax paid is small.

Metalliferous Mines License Tax

Persons operating mines in Montana pay a tax on the value of all marketable metals removed. The rates include an annual license fee of one dollar and a graduating scale varying from 0.5 percent to 1.25 percent of gross market value of the metals removed depending on the amount of metal removed. The tax is administered by the State Board of Equalization, which requires both annual reports and tax payments.

The compliance cost of this tax was measured by sending questionnaires to nine taxpayers. Two usable questionnaires were returned and the cost estimates are shown in Table 19.

The sum of compliance costs for all firms divided by the total of taxes paid shows cost as .07 percent of tax paid. The average of cost as a percentage of tax for each firm is .04 percent. Clearly, compliance cost of the metalliferous mines license tax for the two reporting firms is very low.

TABLE 19

COMPLIANCE COSTS TO TWO BUSINESS FIRMS FROM THE MONTANA METALLIFEROUS MINES LICENSE TAX

Firm	Record Keeping	Filing and Remitting	Total Cost	Tax Paid	Cost as a Percentage of Tax
1	\$ 0	\$ 0	\$ 0	\$ 3,290	0 %
2	<u>600^a</u>	<u>--</u>	<u>600</u>	<u>901.913</u>	.07
Total	\$ 600	\$ 0	\$600	\$905,203	

^a Estimate for both record keeping and filing and remitting costs are combined.

$$\frac{\text{Cost}}{\text{Tax}} = .07\%$$

$$\frac{\text{Cost}}{\text{Tax}} = .04\%$$

Micaceous Minerals License Tax

Everyone operating a mine from which micaceous minerals are taken must pay an annual tax of five cents per ton. The State Board of Equalization, which administers the tax, requires an annual report and quarterly tax payments.

Compliance cost information is available for only payers of this tax. The business firm which produces vermiculite, paid \$8,000 in tax last year, and reported negligible compliance cost.

UTILITIES

Electric Energy Company License Tax

The electric energy company license tax is based on the gross sales of electricity and electrical power. The rate is one and on-quarter percent of gross sales, and both monthly reports and tax payments are required.

Questionnaires were sent to four taxpayers to determine the compliance cost of this tax. Three questionnaires were returned, but only one was complete enough to be useful. The estimates of this firm showed total compliance cost to be \$10 against \$5,184 of tax paid. This makes cost .19 percent of tax. The two other firms returned questionnaires completely filled out except for the compliance cost estimates. Apparently, they deemed the costs to be negligible.

Telephone Company License Tax

All telephone companies must pay a tax on gross income derived from intrastate business. The rate is one and one-half percent on sales over \$250 quarterly. Quarterly reports to the State Board of Equalization are required, and tax payments are to accompany the reports.

There are fourteen payers of this tax. Eight of these firms returned questionnaires and seven of the questionnaires were usable. Table 20 contains the estimates.

TABLE 20

COMPLIANCE COSTS TO SEVEN BUSINESS FIRMS FROM THE MONTANA TELEPHONE COMPANY LICENSE TAX

Firm	Record Keeping	Filing and Remitting	Total Cost	Tax Paid	Cost as a Percentage of Tax
1	\$ 8	\$ 0	\$ 8	\$ 477	1.68
2	57	3	60	982	6.11
3	25	15	40	1,136	3.52
4	3	0	3	1,273	.24
5	0	34	34	5,011	.68
6	300	0	300	24,441	1.23
7	<u>0</u>	<u>0^a</u>	<u>0</u>	<u>401,962</u>	0
Total	\$393	\$52	\$445	\$435,282	

^aTaxpayer indicated that there was a cost but that he felt it was negligible.

$$\frac{\text{Cost}}{\text{Tax}} = .10\%$$

$$\frac{\text{Cost}}{\text{Tax}} = .45\%$$

The total of compliance costs for all firms as a percentage of the total amount paid is .10 percent. The average of the cost as a percentage of tax for each firm was 1.92 percent. From these data there does not appear to be a relationship between cost as a percentage of tax and the amount of tax paid in the sense that both companies paying large amounts of tax and those paying relatively small amounts were able to efficiently comply with the tax.

Natural Gas Distributors Tax

The natural gas distributors tax is based on the cubic feet of natural gas produced or distributed in the state. The rate is one-half of one cent per 1000 cubic feet, and both quarterly reports and tax payments to the Board of Equalization are required. In addition to this tax there is a gas conservation tax which is one mill per 10,000 cubic feet of gas. Revenue from the conservation tax is used to help finance the operations of the Oil and Gas Conservation Commission. The Commission administers the tax and requires quarterly reports and tax payments. The combined administrative cost of this gas conservation tax and the oil conservation tax will be presented in a later section. No compliance cost information is available concerning these conservation taxes.

The compliance cost of the natural gas distributors tax was estimated by sending questionnaires to six taxpayers. All six were returned and four were complete enough to be usable. Table 21 shows the estimates.

The sum of compliance costs for all firms divided by the total amount of tax paid was .10 percent. The average of costs as a percentage of tax for the individual firms was .45 percent. The data suggest that compliance costs of the natural gas distributors were of no serious consequence for the four reporting companies.

TABLE 21

COMPLIANCE COSTS TO FOUR BUSINESS FIRMS FROM THE MONTANA NATURAL GAS DISTRIBUTORS TAX

Firm	Record Keeping	Filing & Remitting	Total Cost	Tax Paid	Cost as a Percentage of Tax
1	\$ 0	\$ 0	\$ 0	\$1,231	0
2.	0 ^a	28	28	1,805	1.55
3	5	0	5	1,964	.25
4	0 ^a	0	0	29,623	0
Total	\$5	\$28	\$33	\$34,623	

^aTaxpayer indicated that there was a cost but that he felt it was negligible.

$$\frac{\text{Cost}}{\text{Tax}} = .10\%$$

$$\frac{\text{Cost}}{\text{Tax}} = .45\%$$

TABLE 22

COMPLIANCE COSTS TO TWENTY-ONE INSURANCE COMPANIES FROM THE MONTANA
INSURANCE COMPANIES TAX

Firm	Record Keeping	Filing & Remitting	Total Cost	Tax Paid	Cost as a Percentage of Tax
1	\$ 0 ^c	\$ 0	\$ 5	\$ 6	83.33
2	0	20	20	57 ^d	35.09
3	0	0	0	59	0
4	110	20	130	293	44.37
5	0 ^c	25	25	363	6.89
6	0	0	0	295	0
7	0	25	25	415	6.02
8	35	27	62	556	11.15
9	0 ^c	25	25	572	4.37
10	0 ^c	50	50	591	8.46
11	0 ^c	300	300	1,388	21.61
12	0 ^c	200	200	1,601	12.49
13	0	35	35	1,663	2.10
14	0 ^c	20	20	1,807	1.11
15	0 ^c	0 ^a	0	3,093	0
16	0	11	11	4,125	.27
17	0 ^c	10	10	5,480	.18
18	500	50	550	26,235	2.10
19	135	100	253	37,889	.62
20	100	100	200	67,000	.30
21	<u>13,000^b</u>	<u>375^b</u>	<u>13,375^b</u>	<u>92,341^b</u>	14.48
Total	\$13,880	\$1,398	\$15,278	\$245,929	

^aTaxpayer indicated that there was a cost but that he felt it was negligible.

^bThese figures represent the combined experience of four Montana insurance companies.

^cCost was estimated as negligible because the record keeping process was needed for similar taxes in other states.

^dThis figure for tax paid includes the annual filing and license fee of \$25.

$$\frac{\text{Cost}}{\text{Tax}} = 6.22\%$$

$$\frac{\text{Cost}}{\text{Tax}} = 10.16\%$$

OTHER SPECIAL LICENSE TAXES

Insurance Companies Tax

All insurance companies operating in the state are required to pay an annual license and filing fee of \$50, and also to pay a tax of 2.25 percent of premiums collected. An annual report and tax payment to the State Auditor's Office is required of all taxpayers. Questionnaires were sent to a random sample containing 39 insurance companies of all types, (such as, life, fire, automobile, etc.), in order to determine the compliance cost of the tax. Twenty-one usable questionnaires were returned. Table 22 presents the cost estimates.

The sum of compliance costs for the responding insurance companies was \$15,278, while the total amount of tax paid was \$245,929. Thus, cost was 6.21 percent of tax remitted. The average of cost as a percentage of tax paid for each firm was 12.14 percent. The data do tend to show that efficiency in complying with the tax rises to some extent as the amount of tax paid increases. In spite of the fact that many companies reported negligible record keeping costs the total (or average) were quite large in relation to total filing and remitting costs. Several individuals made comments to the effect that they thought certain aspects of the record keeping requirements were difficult to perform. Both of the costs as a percentage of tax paid figures, 6.21 percent and 12.14 percent, do suggest that the insurance companies tax is somewhat costly to comply with when compared with other similar taxes.

Retailers Licence Tax (Chain Store Tax)

Every person or business firm in Montana establishing one or more retail stores under the same general management must pay a license tax. The rate varies according to the number of stores and increases from six dollars for the first store to \$201 for each store in excess of five. Wholesale stores pay a fixed rate of \$38.50 per store. No reports are required, and tax payment is made annually. Thirty-nine taxpayers were sent questionnaires, twelve of which were returned, but only four of which had complete compliance cost estimates. The estimates are contained in Table 23.

TABLE 23

COMPLIANCE COSTS TO FOUR BUSINESS FIRMS FROM THE MONTANA CHAIN STORE TAX

Firm	Record Keeping	Filing and Remitting	Total Cost	Tax Paid	Cost as a Percentage of Tax
1	\$ 0	\$ 0	\$ 0	\$ 6	0
2	10	0	10	25	40.00
3	0	1	1	157	.64
4	0	0 ^a	0	4,530	0
Total	\$10	\$1	\$11	\$4,718	

^aTaxpayer indicated that there was a cost but that he felt it was negligible.

$$\frac{\text{Cost}}{\text{Tax}} = .23\%$$

$$\frac{\text{Cost}}{\text{Tax}} = 10.16\%$$

The sum of all costs divided by total tax paid is .22 percent, while the average of each cost as a percentage of tax is 10.16 percent. The latter figure is higher merely because of firm number two in the table which reported \$10 of cost against \$25 of tax paid. This estimate is hard to understand, since the \$10 cost was for record keeping; the chain store tax requires no records. The data are of little use in measuring the compliance cost of the tax.

Special Fuel Users and Dealers Tax

The special fuel users and dealers tax is based on the gallons of special fuel used in vehicles operating on highways in the state. Both dealers and users must obtain licenses and file bonds of not less than \$500. The tax rate is six cents per gallon on gasoline and nine cents per gallon for diesel fuel. Returns must be filed with the State Board of Equalization every month with accompanying tax payment.

Questionnaires concerning the compliance cost of the tax were sent to a random sample of 25 special fuel dealers. Seventeen responded and eleven of these responses were usable. Questionnaires were also sent to a random sample of 25 special fuel users. Twelve of them responded, and nine of the questionnaires provided estimates. Table 24 shows the cost estimates for the fuel dealers and Table 25 shows those of the fuel users.

For Table 24, the sum of all costs divided by the total of taxes paid was 1.20 percent. The average of each firm's cost as a percentage of tax paid was 5.55 percent. There appears to be little relationship between cost as a percentage of tax and amount of tax paid, although there may be some significance to the fact that the two firms paying the smallest amount of tax had the highest costs as a percentage of tax paid. Costs as a percentage of tax do vary quite a bit, and while the total cost in relation to tax paid is fairly small, there are individual cases where the costs appear to be excessive.

With the estimates from Table 25, the total of all compliance costs as a percentage of tax paid is 5.03 percent. The average cost as a percentage of tax for each firm was 123.87 percent. This latter figure is extremely high because of the high costs experienced by firms number one and number three in relation to their relatively small amounts of tax paid. It is important to note that those three firms which had the greatest relative compliance cost were the same three firms that paid the smallest amount of tax. For most taxpayers, the record keeping costs were substantially greater than for filing and remitting.

TABLE 24

COMPLIANCE COSTS OF 11 SPECIAL FUEL DEALERS FROM THE MONTANA SPECIAL FUEL USERS AND DEALERS TAX

Firm	Record Keeping	Filing & Remitting	Total Cost	Tax Paid	Cost as a Percentage of Tax
1	\$ 360	\$ 0	\$ 360	\$1,500	24.00
2	150	130	280	2,000	14.00
3	228	0 ^a	228	4,200	5.43
4	125 ^c	0	125	7,245	11.73
5	80 ^c	30	110	8,759	1.26
6	390	0 ^a	390	9,740	4.00
7	275	72	347	25,454	1.36
8	1,380	0	1,380	26,770	5.16
9	775	20	795	28,360	2.80
10	1,800	---	1,800	160,750	1.12
11	720	60	780	275,400	.28
Total	\$5,283	\$312	\$6,595	\$550,178	

^aTaxpayer indicated that there was a cost but that he felt it was negligible.

^bCosts of both record keeping and filing and remitting are combined.

^cHere the taxpayer estimated cost in terms of time. A value of \$2 per hour was used for all time estimates.

$$\frac{\text{Cost}}{\text{Tax}} = 1.20\%$$

$$\frac{\text{Cost}}{\text{Tax}} = 5.55\%$$

TABLE 25

COMPLIANCE COSTS TO NINE SPECIAL FUEL USERS FROM THE MONTANA SPECIAL FUEL USERS AND DEALERS LICENSE TAX

Firm	Record Keeping	Filing & Remitting	Total Cost	Tax Paid	Cost as a Percentage of Tax
1	\$ 180	\$ 0	\$ 180	\$ 20	900.00
2	48 ^{ab}	0	48	286	16.78
3	470	183	653	360	181.39
4	0	24	24	695	3.45
5	240 ^a	---	240	5,413	4.43
6	28 ^a	0	28	6,820	.41
7	0 ^c	20 ^b	20	13,161	.15
8	340	10	20	15,712	2.23
9	<u>3,045</u>	<u>550</u>	<u>3,585</u>	<u>59,471</u>	6.03
	\$4,351	\$787	\$5,128	\$101,938	

^aThe cost estimates for both record keeping and filing and remitting are combined.

^bThe estimate was made in terms of time and a value of \$2 per hour was used.

^cThe taxpayers stated records were kept anyway and there fore cost was negligible

$$\frac{\text{Cost}}{\text{Tax}} = 5.03\%$$

$$\frac{\text{Cost}}{\text{Tax}} = 123.87\%$$

CONCLUSIONS CONCERNING SPECIAL LICENSE TAXES

From the preceding presentations, it is obvious that compliance costs of Montana's various special license taxes are extremely variable. In most cases the taxes are not expensive to comply with. However, in all too many cases, costs in relation to taxes remitted were excessive, making the particular tax a very inefficient means of gathering revenue. Some error in the cost figures undoubtedly exists, for the answers are merely estimates which for the most part are difficult to make. In spite of this, the data do tend to show a significant amount of inequity and inefficiency in the process of determining and paying taxes.

ADMINISTRATIVE COST OF MONTANA SPECIAL LICENSE TAXES

The administrative costs of various Montana special license taxes were estimated through personal interview with the appropriate government agency involved. The estimates include the cost of enforcing and collecting the tax and were arrived at by asking what portion of total expenditure for the fiscal year ending June 30, 1965, was made in the administration

of each particular tax. As in the case of the other taxes discussed, the actual administrative amounts arrived at in each case will be understated by any cost of administration that is not included as current expenditures of the governmental agencies involved.

State Board of Equalization personnel stated that the combined yearly administrative costs of the following special business license taxes was about \$2,000: metalliferous mines, micaceous minerals, coal mines, cement dealers, telephone company, telegraph company, electric energy, express company, natural gas, and freight line company. The administrative cost of each of these taxes was so small that it was impossible to make individual estimates of them. Total revenue from the taxes was \$2,430,222, so administrative cost averaged only .08 percent of revenue.

Table 26 shows the administrative costs of six other Montana license taxes were quite costly to administer. The chain store tax brought revenue of \$189,174 at a cost of \$17,401, making cost 9.20 percent of revenue. The boat certificate tax (certificate of number tax) was even more expensive with an administrative cost that is 21.71 percent of tax collected. For all six taxes in Table 26, total revenue divided by total administrative cost was 1.68 percent. The average for cost divided by revenue for each tax taken separately was 6.61 percent. This latter figure is greater due to the high cost to revenue experienced for the boat certificate tax, which produced little revenue.

The total revenue from all 16 special license taxes was \$7,616,158, while total administrative cost was \$89,332. Cost was therefore 1.17 percent of revenue. The average of cost as a percentage of tax for all 16 taxes taken individually was 2.53 percent. In all but a few cases, the Montana special license taxes are fairly inexpensive to administer.

TABLE 26

ADMINISTRATIVE COSTS OF SIX MONTANA SPECIAL LICENSE TAXES FOR WHICH SEPARATE ESTIMATES ARE AVAILABLE

Name of Tax	Revenue	Administered by	Administrative Cost	Cost as a Percentage of Tax
Chain Store License	\$ 189,174		\$17,401	9.20
Oil Producers	1,793,144	State	3,327	.19
Boat Certificate	15,441	Board of Equal-	3,352	21.71
Contractors License	64,290	ization	2,146	3.34
Oil and Gas Conservation Tax	146,648	Oil and Gas Conservation Comm.	4,911	3.35
Insurance Company	2,977,239	State Auditor's Office	56,195	1.89
TOTAL	\$5,185,936		\$87,332	
	$\frac{\text{Cost}}{\text{Tax}} = 1.68\%$		$\frac{\text{Cost}}{\text{Tax}} = 6.61\%$	

ALCOHOLIC BEVERAGE TAXES

Montana imposes an excise tax on all liquors sold or delivered in the state. There is also a tax on beer sold by brewers and wholesalers. Rates of the alcoholic beverage taxes are 20 percent of the price charged to all buyers by the state liquor stores while the tax on beer is \$1.50 per 31 gallons. The 20 percent tax on liquor is collected by the state liquor stores of the Montana Liquor Control Board when the liquor is sold. The tax on beer is paid by wholesale beer distributors in the state and both monthly reports and tax payment to the Liquor Control Board are required.

The Montana Liquor Control Board levies the tax on liquor simply by adding twenty percent to what would otherwise be the price of liquor. Since the Board must set a price for each item it sells through its liquor stores whether or not the tax exists, the authors have assumed that it costs nothing to administer the liquor excise. And of course this excise involves no compliance costs for individual or private firms, for they have nothing to do with the tax collection process.

Compliance Cost of the Montana Beer Tax

The tax on beer does rise to compliance costs which are incurred by private taxpayers. These costs were estimated from questionnaires sent to the 70 wholesale beer distributors in Montana. Questionnaires were returned by 33 firms and 27 of these were complete enough to be useful.

The total amount of compliance cost for all firms divided by the total of tax paid was 1.34 percent. The average of cost as a percentage of tax for each firm was 2.16 percent. However, the percentage varies considerably from firm to firm. By either method of calculation it can be seen that compliance costs in relation to tax paid were not excessively high. In only one firm of the 27 reporting did the cost exceed seven percent of the tax. There appeared to be no relationship between the percentage of cost and the amount of tax paid.

Administrative Cost of the Montana Beer Tax

The administrative cost of the Montana tax on beer was estimated through personal interviews with personnel of the State Liquor Control Board which administers the tax. The cost determined represents the total expenditures made by the Liquor Control Board in administering the tax on beer and understates the actual cost of administration by the amount of general overhead expense attributable to the tax. General overhead expense probably would represent only a small portion of the total administrative cost. The administrative cost of the tax was found to be \$3,007 for the fiscal year ending June 30, 1966. This cost was about .44 percent of revenue. Apparently, the Montana tax on beer is both inexpensive to comply with and efficient to administer.

A second administrative cost is applied to the beer and liquor license tax. This is the cost to the Liquor Control Board in enforcing the requirement that those firms required to purchase licenses from the Board do so and properly display these licenses. The cost to the Liquor Control

Board of performing this function is \$17,650, while revenue gained from the licenses is \$965,350. Including this regulatory cost makes the total cost about 1.83 percent of revenue.

CIGARETTE TAX

All cigarettes sold or held for sale in the state of Montana are subject to a tax. The tax is directed at ultimate consumers by precollected from wholesale tobacco distributors for administrative convenience. The rate of the tax is eight cents on each pack of twenty cigarettes. No reports are filed for the tax, but the wholesalers must preserve their sales records for at least one year. The wholesaler must stamp each package of cigarettes with a special machine to show that the tax has been paid. Each month he must have the machine set for use by his county treasurer. At that time, the treasurer collects the amount of the tax corresponding to the number of impressions set on the machine. The wholesalers are allowed a discount of five percent of the tax revenue they collect to compensate them for their trouble and expense in handling the tax.

In order to estimate the cost to the wholesalers of complying with this tax, 38 tobacco distributors were contacted by telephone. Of these, relevant information could be obtained from only eleven. The eleven firms do, however, represent a fairly equal distribution between small, medium, and large scale operations. Collection costs were broken down into ten categories. These ten cost categories are shown in Table 27 by their relative importance in contributing to the total collection cost.

TABLE 27

TEN COMPLIANCE COST ITEMS OF THE MONTANA CIGARETTE TAX SHOWN AS A PERCENTAGE OF THE TOTAL COMPLIANCE COSTS OF ELEVEN FIRMS COLLECTING THE TAX

Cost Item	Cost as a Percentage of the total
Wages	40.1%
Depreciation of Stamping Machines	8.9
Maintenance of Stamping Machines	4.7
Stamping Head Rent	6.0
Interest	21.9
Supplies	6.2
Rent	10.7
Insurance	1.9
Certified Checks	1.7
Electricity	.1
TOTAL	100.0%

It can be seen from Table 27 that wages were the largest single expense in affixing the stamps and collecting the revenue. The interest expense item assumed that the firms borrowed the funds to finance the tax set on

it which must be paid for in advance. Rent expense covers use of the area needed to contain the stamping machine and related articles. The cost estimates are complete except perhaps for bad debts experienced by the wholesalers for cigarettes on which they have already paid the tax. This would however, be very minor in most cases.

The aggregate of the compliance costs for all firms taken together amounted to 2.76 percent of total taxes collected. The average cost per firm was 2.69 percent. Cost as a percentage of the tax varies only moderately from firm to firm and seemed to be independent of the firm's size. In no case was the cost as much as the five percent discount allowed the wholesaler. On the average the compliance costs were 55 percent of the discount. It may be concluded that tobacco wholesalers apparently make a profit rather than bear a cost from complying with the Montana cigarette excise.

Administrative Cost

The administrative cost of the Montana cigarette tax was estimated through personal interview with the State Board of Equalization which administers the tax. About \$2,800 of the Board's total expenditure in the fiscal year ending June 30, 1965, went for administration of the cigarette tax. Revenue from the tax during the same period was \$6,321,000, so the administrative cost was .04 percent of tax collected. This administrative cost estimate does not include the efforts of local county treasurers who are responsible for setting the machines used to stamp the cigarette packages and collecting the tax. However, through telephone interview with several county treasurers across the state, it was determined that the cost of performing this function was small and would not significantly increase total administrative cost of the tax. Apparently, the Montana cigarette tax is very efficient to administer.

MONTANA INHERITANCE TAX

The Montana inheritance tax falls on each beneficiary's share of an estate. The tax has graduated rates which vary according to the degree of relationship between the deceased and the beneficiary. Those individuals of close relationship to the decedent are subject to lower rates than those of more distant relationship. Various exemptions are also allowed. The tax is primarily administered by the State Board of Equalization, although some county level administration also takes place.

Compliance Cost

The compliance costs presented in this section were gathered in a study recently completed by H. Norman Larsen, graduate student in economics at the University of Montana. Mr. Larsen measured the compliance cost of the Montana inheritance tax by sending questionnaires to a random sample of lawyers, accountants, and bank officials in the state. The recipients of the questionnaires were asked to estimate their efforts during 1965 which were attributable to the Montana inheritance tax. The compliance costs of individuals complying with the tax were also included by asking lawyers to estimate them. Table 28 presents the cost estimates.

TABLE 28

COMPLIANCE COST ESTIMATES OF FOUR GROUPS OF INDIVIDUALS INVOLVED
IN ADMINISTRATION OF THE MONTANA INHERITANCE TAX

Layers	\$250,500
Accountants	9,100
Bank Officials	3,900
Individuals (Exclusive of fees)	<u>43,000</u>
Total Compliance Cost	\$306,500

Total compliance cost was \$306,500. The revenue collected during the same period of time was \$2,498,000, so the cost was 12 percent of revenue. This figure indicates that the Montana inheritance tax is inexpensive to comply with.

Administrative Cost

Montana Board of Equalization personnel estimated that it cost \$27,765 last year to administer the tax; revenue during the same period was \$2,498,000. Thus the cost was 1.1 percent of revenue. This figure actually understates the administration of the inheritance tax to a limited extent because many county treasurer's offices and some clerk and recorder's offices are also involved in administration of the tax. But the total administrative costs, even with these added in, seems low.

GENERAL CONCLUSIONS

Table 29 presents a summary of the administrative and compliance costs for the various taxes included in the study. The reader can see that in most cases, the administrative and compliance costs of these Montana taxes were not great. However, in some cases, the costs in relation to revenue or tax paid were quite excessive. There could be many reasons for these high costs, and before any changes could be recommended a detailed investigation for each tax would be necessary. But excessive administrative and compliance costs are a misallocation of resources, so these costs should be taken into account in an evaluation of our Montana taxes.

TABLE 29

SUMMARY OF ADMINISTRATIVE AND COMPLIANCE COSTS FOR VARIOUS MONTANA
T A X E S

Type of Tax	Compliance Cost as a Percentage of Tax Paid	Administrative Cost as a Percentage of Revenue	Administrative plus Compliance Costs as a Per- centage of Revenue
Personal Income Tax	23.2%	2.1%	25.3%
Corporation License Tax	10.2	.4	10.6
Non-motor Vehicle Business Property Tax	1.2	2.8 ^b	4.0

TABLE 29 (Continued)

Type of Tax	Compliance Cost as a Percentage of Tax Paid	Administrative Cost as a Percentage of Revenue	Administrative plus Compliance Costs as a Per- centage of Revenue
Non-Motor Vehicle Individual Property Tax	.8	2.8 ^b	3.6
Motor Vehicle Taxes	7.7	9.9	17.6
Oil Producers	.3	.2	.5
Coal Mines License	49.7 ^f	--- ^a	49.7
Cement Dealers	.1	--- ^a	.1
Metalliferous Mines	.1	--- ^a	.1
Micaceous Minerals	--- ^d	--- ^a	---
Electric Energy	.2	--- ^a	.2
Telephone Company	.1	--- ^a	.1
Natural Gas	.1	--- ^a	.1
Special Fuel Users	5.0	.9 ^c	5.9
Special Fuel Dealers	1.2	.9 ^c	2.1
Insurance Companies	6.2	1.9	8.1
Chain Store License	.2	9.2	9.4
Beer Tax	1.3	.4	1.7
Cigarette Tax	2.7	.04	2.7
Inheritance	12.0	1.1	13.1
Boat Certificate	--- ^e	21.7	---
Contractors License	--- ^e	3.3	---
Oil and Gas Conservation Tax	--- ^e	3.4	---

^aAdministrative cost was reported negligible in relation to revenue.

^bThis figure combines the business and individual non-motor vehicle property tax.

^cThis figure represents administrative cost of all motor fuel taxes.

^dCompliance cost was negligible in relation to tax paid.

^eNo compliance cost estimates are available for these taxes.

^fThe size of this figure is due to the small amount of tax paid and possibly to inaccuracy with reported data.

